Foundations
of Geometry

David Hilbert

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The German mathematician David Hilbert was one of the most influential mathematicians of the 19th/early 20th century. Hilbert's 20 axioms were first proposed by him in 1899 in his book *Grundlagen der Geometrie* as the foundation for a modern treatment of Euclidean geometry.

Hilbert's axiom system is constructed with six primitive notions: the three primitive terms *point, line*, and *plane*, and the three primitive relations *Betweenness* (a ternary relation linking points), *Lies on* (or Containment, three binary relations between the primitive terms), and *Congruence* (two binary relations, one linking line segments and one linking angles).

The original monograph in German was based on Hilbert's own lectures and was organized by himself for a memorial address given in 1899. This was quickly followed by a French translation with changes made by Hilbert; an authorized English translation was made by E.J. Townsend in 1902. This translation - from which this audiobook has been read - already incorporated the changes made in the French translation and so is considered to be a translation of the 2nd edition.

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